

07/05/00



07-07-00

A

LAW OFFICE
MARY M. LEE, P.C.
3441 W. MEMORIAL ROAD, SUITE 8
OKLAHOMA CITY, OKLAHOMA 73134-7000

Telephone: (405) 302-0900
Facsimile: (405) 302-0901

Email: mml@marymlee.com
http://www.marymlee.com

Patent, Trademark, Copyright and Related Matters

jc867 U.S. PTO
09/610196
07/05/00

July 5, 2000

Box PATENT APPLICATION
Assistant Commissioner of Patents
Washington, D.C. 20231

Re: U.S. Patent Application
For: HAIR STYLING BRUSH WITH
REVERSE AIR FLOW
Filed: Herewith
Inventors: Tommy Leon Myatt
Att'y Dkt. No.: 5300-001

Commissioner:

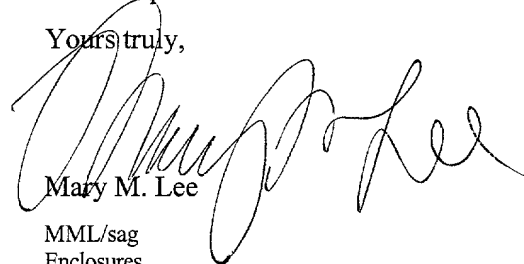
Enclosed for filing please find an original application directed to the above-referenced invention, including 4 sheets of formal drawings and a Combined Declaration and Power of Attorney signed by the inventor. Also enclosed for filing are the following:

- 1) Assignment of Invention with Recordation Cover Sheet;
- 2) Statement Claiming Small Entity Status – Independent Inventor;
- 3) Statement Claiming Small Entity Status – Small Business Concern; and
- 4) Power of Attorney by Assignee.

A check in the amount of \$424.00 for the filing fee of and the recordation fee is enclosed. Please charge any fee deficiency, or credit any overpayment, to Deposit Account No. 50-0464.

A return postcard is also enclosed.

Yours truly,


Mary M. Lee
MML/sag
Enclosures


CERTIFICATE OF MAILING – EXPRESS MAIL
37 C.F.R. § 1.10

Express Mail No. EL342794211US

Date of Deposit: July 5, 2000

I hereby certify that this correspondence and the documents referred to as enclosed herein are being deposited with the United States Postal Service on the date shown above, in an envelope as "Express Mail Post Office to Addressee," having the Express Mail No. shown above, addressed to Assistant Commissioner for Patents, Washington, D.C. 20231.

Name of Person Mailing Paper: Shelly A. Giese

Signature: 

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Myatt, Tommy Leon
Application No.: Not Yet Assigned
Filed on: Herewith
Title: HAIR STYLING BRUSH WITH REVERSE AIR FLOW

**STATEMENT CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) and 1.27(b))--SMALL BUSINESS CONCERN**

I hereby state that I am an official of the small business concern empowered to act on behalf of the concern identified below:

Natural Volumn Systems, LLC
5 W. 8th Street
Edmond, OK 73001

I hereby state that the above identified small business concern qualifies as a small business concern, as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office under Sections 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third-party or parties controls or has the power to control both.

I hereby state that all rights under contract or law have been conveyed to, and remain with, the small business concern identified above, with regard to the invention described in the specification filed herewith, with title as listed above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c), if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e). Each such person, concern or organization is listed below:

None

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small business entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed..

NATURAL VOLUME SYSTEMS, LLC

By: Robert W. Naegeli
Robert W. Naegeli, Vice President

Date: June 13, 2000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Myatt, Tommy Leon
 Application No.: Not Yet Assigned
 Filed on: Herewith
 Title: HAIR STYLING BRUSH WITH REVERSE AIR FLOW

STATEMENT CLAIMING SMALL ENTITY STATUS
 (37 CFR 1.9(f) and 1.27(b))--INDEPENDENT INVENTOR

As a below named inventor, I hereby state that I qualify as an independent inventor, as defined in 37 CFR 1.9(c), for purposes of paying reduced fees to the United States Patent and Trademark Office under Sections 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office, with regard to the invention described in the specification filed herewith, with title as listed above.

I have not assigned, granted, conveyed or licensed, and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c), if that person had made the invention, or to any concern that would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

Natural Volume Systems, LLC
 5 W. 8th Street
 Edmond, OK 73003

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Tommy Leon Myatt Date 6-13-2000
 Tommy Leon Myatt

HAIR STYLING BRUSH WITH REVERSE AIR FLOW

FIELD OF THE INVENTION

The present invention relates generally to hair styling brushes.

5

BACKGROUND OF THE INVENTION

Hand-held blow dryers have rapidly become one of the most popular devices for drying hair. A styling brush is often used with a blow dryer, to style and curl the hair as it is dried. While the use of conventional styling brushes provides good styling capability, there remains a need to improve the ability of the styling brush to hold the lock of hair in a desired shape and to hasten the drying process. Further, there is a need to reduce the likelihood that hair will be damaged by over-exposed to the heated air. Still further, there is a need for a styling brush that can effectively cool the hair after it has been dried and while it is stabilized in the desired configuration. This post-styling cooling step makes the hair shafts look and feel smoother, enhances the volume and makes the hair less prone to tangles.

SUMMARY OF THE INVENTION

The present invention is directed to a hair styling brush. The brush includes a body with a curved, perforated surface. Bristles extend from the curved, perforated surface of the body, and the bristles and the curved perforated surface are adapted to cooperate to support a lock of the user's hair in a selected shape. A handle extends from the body. Also included is a blower assembly operatively associated with

the body and positioned to draw air through the curved, perforated surface of the body when hair is supported thereon.

In another aspect, the present invention is directed to a hair styling brush having a body with a perforated surface and a handle extending from the body. Bristles extend from the perforated surface of the body, and the bristles and the perforated surface are adapted to cooperate to support a lock of the user's hair in a selected shape. A blower housing is between the handle and the body, and a blower assembly is supported therein. The blower assembly is configured to draw air through the perforated surface of the body when hair is supported thereon. The blower housing includes exhaust holes positioned to direct airflow from the blower assembly toward the handle so that the exhaust air will contact the user's hand.

In a further embodiment, the present invention comprises a method for styling hair. In accordance with the method, a lock of hair to be styled first is selected. Next, the lock of hair is supported on a perforated surface. Then, air from a first blower is blown towards the lock of hair. In addition, air from a second blower is drawn across the lock of hair and through the perforated surface.

In still another aspect, the inventive method for styling hair comprises supporting a lock of hair in a desired shape and applying heat to the lock of hair. Then, the lock is supported on a perforated surface, and ambient air is drawn across the lock of hair and through the perforated surface to cool the lock of hair.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows a side elevational view of a styling brush in accordance with the present invention

Figure 2 shows an exploded view of the styling brush shown in Figure 1.

Figure 3 shows a cross sectional view along the line 3-3 in Figure 1.

Figure 4 shows a cross sectional view along the line 4-4 in Figure 1.

Figure 5 shows a cross sectional view along the line 5-5 in Figure 1.

5 Figure 6 shows the styling brush in use with a blow dryer in accordance with one embodiment of the method of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Turning now to the drawings in general and to Figures 1 and 2 in particular, there is shown therein a hair styling brush made in accordance with the present
10 invention and designated generally by the reference numeral 10. The brush 10 generally comprises a body 12 and a handle 14 extending from the body for supporting the body.

The body 12 preferably has a curved, perforated surface. To that end, the body 12 advantageously may be formed of a hollow tube 16 covered with perforations 18 and terminating at the front end 20 with a blunt, slotted nose 22. This provides a
15 continuously curved or cylindrical surface 24. The rear end 26 of the body is open and the outer surface may include splines 28 for assembly with the other components as yet to be described.

The brush 10 preferably also includes bristles 30. The bristles 30 extend from the curved, perforated surface 24. As best shown in Figures 2 and 3, in the
20 preferred construction the bristles 30 comprise a plurality of long, flexible filaments 32 extending radially from a wire core 34. This is a convenient design, as the core 34 can be simply inserted in the tube 16 so that the filaments 32 extend through the perforations 18.

Alternately, the bristles can be rigid. For example, rigid bristles could be formed directly on the curved surface 24 between the perforations 18.

Now it will be appreciated that the bristles 30 and the curved surface 24 are adapted to cooperate to support a lock of hair in a curled shape. Thus, it will be
5 apparent that neither the number nor the shape of the bristles is critical. Similarly, although the cylindrical shape is preferred, a non-cylindrical curved surface will suffice. In still other embodiments, the perforated surface may be flat.

Returning to Figures 1 and 2, the handle 14 may take any suitable shape. In the present embodiment, the handle 14 is a hollow cylinder with a first end 36 and a
10 second end 38. This allows a good gripping surface on the outside and a conduit for electrical wires in a known manner on the inside.

The hair styling brush 10 preferably further comprises a blower assembly 40 adapted to draw air in through the perforations 18 in the body 12 and the slotted nose 22. Suitable blower assemblies are commercially available, only one
15 exemplary model being illustrated herein.

As best seen in Figure 2, the blower assembly 40 may be supported in a blower housing 42, preferably between the handle 14 and the body 12. More preferably, the blower housing 42 may be formed as an extension of the handle 14, as this simplifies construction and assembly. As best seen in Figure 4, the inside of the blower housing 42
20 preferably includes a plurality of longitudinal grooves 44 sized and positioned to receive the splines 28 on the rear end 26 of the body 12. A screen or hair filter (not shown) may be interposed between the blower assembly 40 and the body 12.

003029-96T960

The blower assembly 40 is selected to have, or is modified to have, an outer dimension that fits inside the blower housing 42. The blower assembly 40 is arranged so that the fan 46 will draw air in the direction shown by the arrows 48 (Figure 1). Exhaust air from the fan 46 is directed out of the blower housing 42 through exhaust holes 50 in the rear end 52 of the housing, depicted in Figures 1, 2 and 5, toward the handle 14.

The blower assembly 42 is electrically connectable to a power source (not shown), such as alternating or direct current. Alternately, other power sources such as compressed air or butane may be utilized. To that end, in the preferred embodiment, wires 54 and an insulated electrical cord 56 extend from the blower assembly 40 through the hollow handle 14 in a known manner. The cord 56 is adapted to connect to a conventional 120-volt household outlet by means of an AC adapter plug 58. An on-off switch 60 may be included in the cord 56 or elsewhere. More preferably, the cord 56 is attached to the rear end 38 of the handle 14 by means of a swivel connector 62.

Returning to Figure 2, the assembly of the brush 10 will be explained. First the bristles 30 are positioned in the tube 16 with the filaments 32 extending through the perforations 18. Next, the blower assembly 40 is positioned in the blower housing 42, and the wires 54 are connected to the leads (not shown) for the cord 56. Next, the rear end 26 of the tube 16 is inserted coaxially between the blower assembly 40 and the blower housing 42 by aligning the splines 28 on the tube with the grooves 44 on the inside of the blower housing, as illustrated in Figure 4. This connection preferably is so snug that the frictional engagement is sufficient to maintain the engagement. However, it

will be apparent that other forms of connection, such as threads, detents, and the like, may be employed instead.

With reference now to Figure 6, the use of the styling brush 10 in accordance with the method of the present invention now will be described. First, the hair is supported in a desired configuration. For example, the lock of hair may be curled around a curling iron or a curved perforated styling brush, as described above. Further, the hair may be held in a substantially straight position by pulling the styling brush (flat or curved) through the hair against the head.

Next, heat is applied to the lock of hair while it is in the desired shape. For example, as shown in Figure 6, the styling brush 10 may be held in one hand 70 while a conventional blow dryer 72 is held in the other hand 74. The lock of hair 76 to be styled first is supported in a curved shape around the brush 10. Air from the blow dryer, or first blower, is directed towards the lock of hair 76 on the brush 10. At the same time, the blower assembly or second blower in the brush is drawing air in through the perforated surface of the body of the brush 10 across the wet lock of hair 76. This two-component blowing operation is continued until the lock of hair 76 is dried and shaped to satisfaction. Alternately, the lock of hair may be supported on a heated curling iron until the desired shape is achieved.

Next, the shaped hair is cooled while being supported in the desired shape. Where the hair has been shaped by applying warm air from a blow dryer to the hair on the styling brush, the hair can be cooled by simply removing the blow dryer. Where the hair has been shaped by using a curling iron, the hair is removed from the curling iron and supported in similar shape on the styling brush. While supported on the styling

brush, the hair is cooled by drawing ambient air through the hair and through the perforated surface on the styling brush.

Now it will be understood that the negative pressure around the perforated surface 24 of the body 12 of the brush 10 created by the reverse air flow will cause the
5 lock of hair 76 to 'hug' the brush better than with bristles alone. Still further, as indicated previously, the exhaust holes 50 in the blower housing 42 cause the exhaust air from the brush 10 to flow towards the handle and across the user's hand 70. While the hair is very wet, the evaporative process will cool even very warm air from the blow dryer 72, and consequently the exhaust air will feel cool against the user's hand. As the
10 hair dries, however, the exhaust air will become increasingly warm signaling to the user that the lock of hair 76 is dry and to remove the blow dryer. In this way, damage from over-drying of the hair can be avoided.

The ability of the reverse airflow to rapidly cool the hair by pulling room air through the brush enhances the volume of the hair and renders the hair shafts
15 smoother. Hair is made compliant by applying heat, such as by blowing warm air on the hair or with a curling iron. When the heat is removed and cool air is applied to the hair, the shape is "set." This has a more lasting effect on the shape of the hair than simply releasing the warmed (still compliant), styled hair.

Changes can be made in the combination and arrangement of the various
20 parts and elements described herein without departing from the spirit and scope of the invention as defined in the following claims.

CLAIMS

What is claimed is:

1. A hair styling brush comprising:
a body with a curved, perforated surface;
bristles extending from the curved, perforated surface of the body;
wherein the bristles and the curved perforated surface are adapted to
cooperate to support a lock of the user's hair in a selected shape;
a handle extending from the body; and
blower assembly operatively associated with the body and positioned to
draw air through the curved, perforated surface of the body when
hair is supported thereon.
2. The hair styling brush of claim 1 wherein the blower assembly is
contained within a blower housing positioned between the body and the handle, wherein
the blower housing is provided with exhaust holes positioned to direct air flow from the
blower assembly toward the handle so that the exhaust air will contact the hand of the
user.
3. The hair styling brush of claim 2 wherein the curved perforated
surface of the body is further defined as cylindrical.
4. The hair styling brush of claim 1 wherein the curved perforated
surface of the body is further defined as cylindrical.
5. The hair styling brush of claim 1 wherein the bristles are flexible.

6. A hair styling brush comprising:
a body with a perforated surface;
bristles extending from the perforated surface of the body;
wherein the bristles and the perforated surface are adapted to cooperate to
support a lock of the user's hair in a selected shape;
a handle extending from the body;
a blower housing between the body and the handle; and
a blower assembly supported in the blower housing and configured to
draw air through the perforated surface of the body;
wherein the blower housing includes exhaust holes positioned to direct
airflow from the blower assembly toward the handle so that the
exhaust air will contact the hand of the user.

7. The hair styling brush of claim 6 wherein the perforated surface of
the body is further defined as cylindrical.

8. A method for styling hair, comprising:
supporting a lock of hair on a perforated surface;
blowing air from a first blower towards the lock of hair; and
drawing air across the lock of hair and through the perforated surface with
5 a second blower to cool the hair.

9. The method of claim 8 further comprising the step of warming the
air from the first blower.

10. A method for styling hair, comprising:

supporting a lock of hair in a desired shape;

applying heat to the lock of hair;

supporting the lock of hair on a perforated surface; and

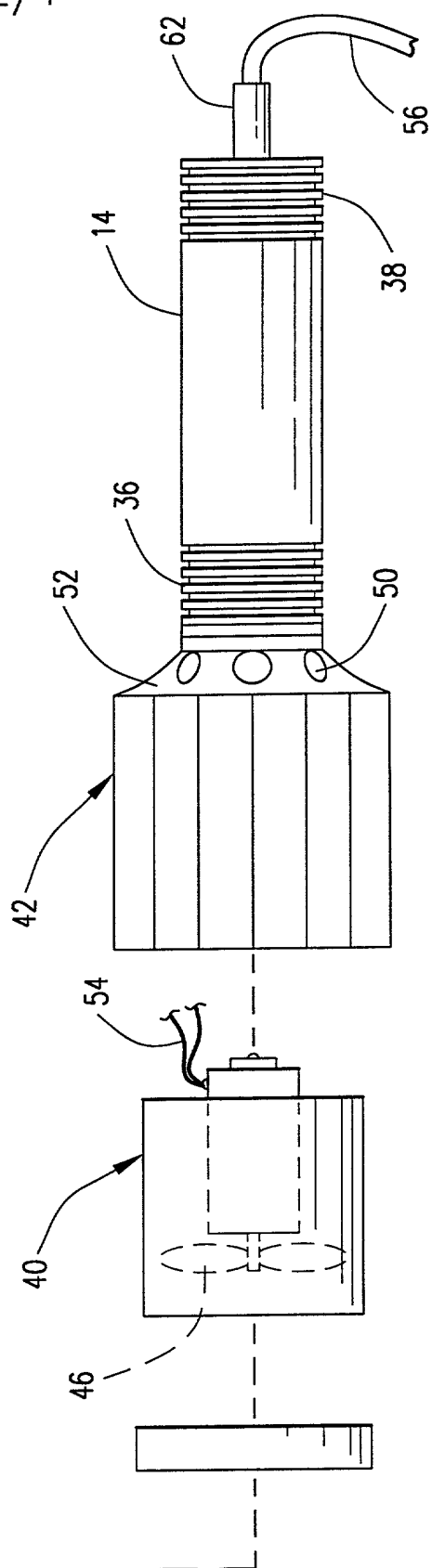
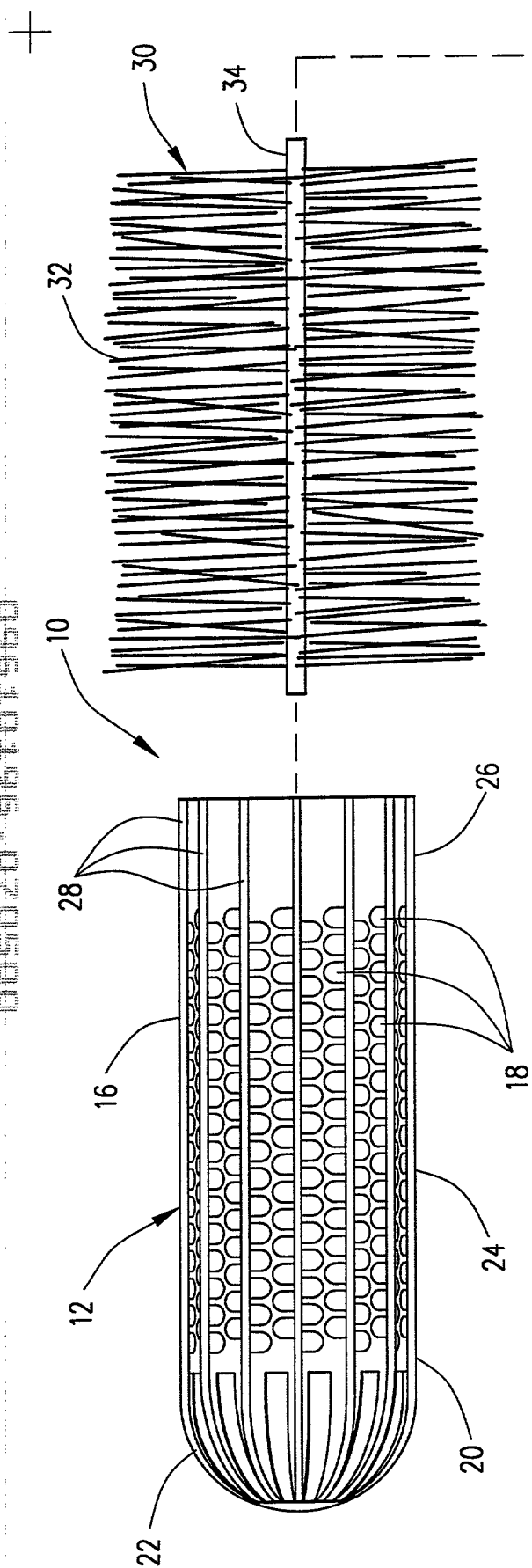
5 drawing ambient air across the lock of hair and through the perforated surface to cool the lock of hair.

11. The method of claim 10 wherein the heat being applied is heated air from a first blower and wherein the drawing of ambient air across the lock of hair and through the perforated surface is carried out by a second blower.

12. The method of claim 10 wherein the heat being applied is from a curling iron.

ABSTRACT OF THE DISCLOSURE

A hair styling brush with reverse airflow. The preferred styling brush has a contoured, bristled body for holding locks of hair in a curved or curled position. The body is perforated, and a blower in the brush draws air in through the perforations across the damp hair. This styling brush preferably is used with a conventional blow dryer or curling iron. When using a blow dryer, warm air from the blow dryer is directed at the lock of hair on the styling brush, while the blower in the styling brush pulls the warm air through the hair. Alternately, after a lock of hair has been styled on a curling iron, the lock then can be cooled rapidly using the styling brush. The styling brush is designed to direct the exhaust air toward the handle. In this way, the user can tell from the temperature of the exhaust when the hair is dry. More specifically, once the hair on the brush is dry, the exhaust air will begin to feel warmer as the evaporation process is no longer cooling it.



3/4

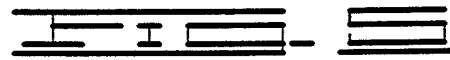
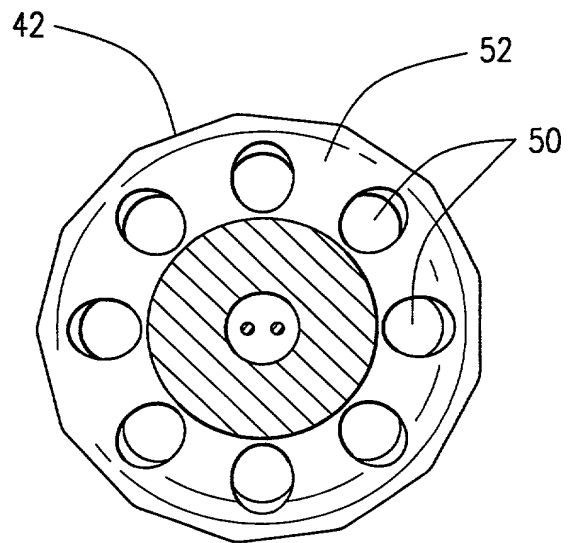
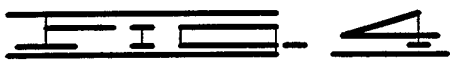
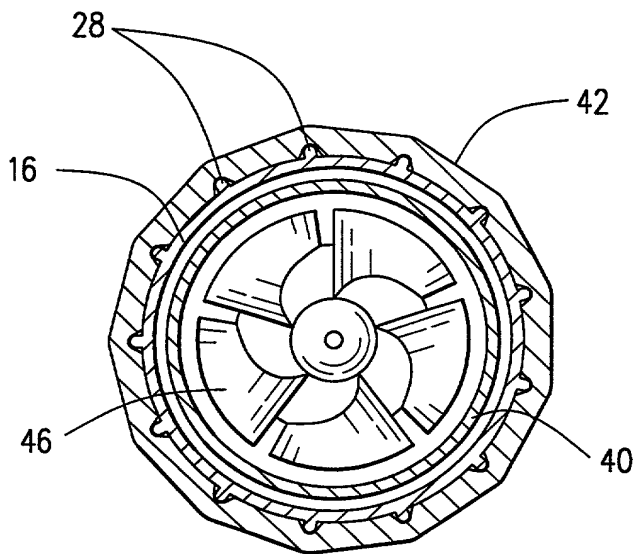
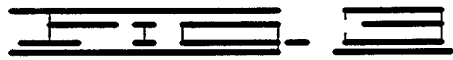
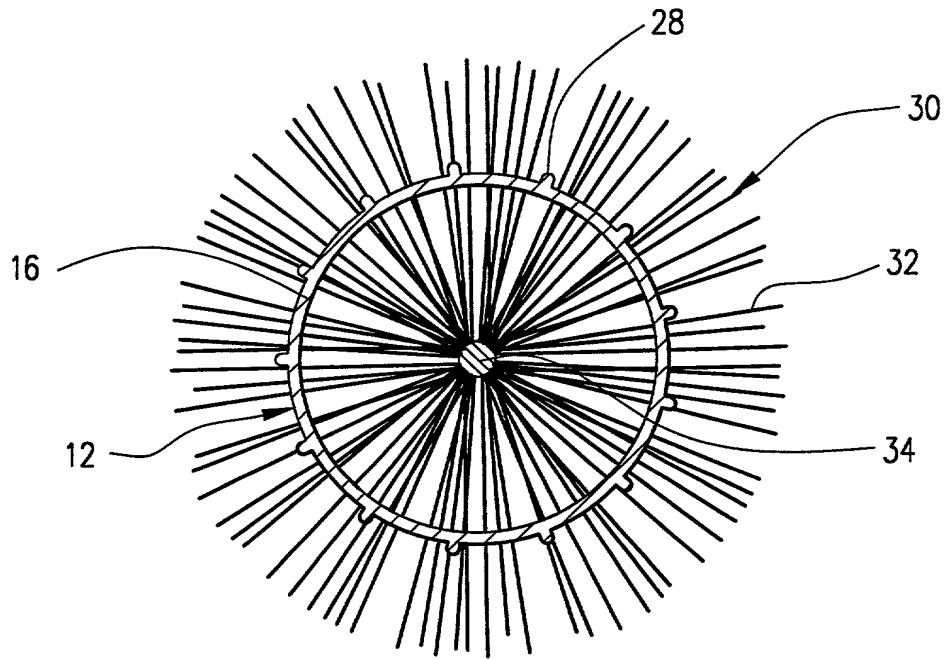




FIG. 4



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Myatt, Tommy Leon
Application No.: Not Yet Assigned
Filed on: Herewith
Title: HAIR STYLING BRUSH WITH REVERSE AIR FLOW

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

**POWER OF ATTORNEY BY ASSIGNEE OF ENTIRE INTEREST
INCLUDING REVOCATION OF PRIOR POWERS
and
STATEMENT UNDER 37 C.F.R. § 3.73(b)
ESTABLISHING RIGHT OF ASSIGNEE TO TAKE ACTION**

Power of Attorney

As assignee of record of the entire interest of the above identified provisional application, Natural Volume Systems, LLC, hereby revokes all powers of attorney previously given and appoints the following practitioner to prosecute and transact all business in the Patent and Trademark Office connected therewith: Mary M. Lee, Registration No. 31,976, Attorney at Law, 3441 W. Memorial Road, Suite 8, Oklahoma City, Oklahoma 73134-7000.

Please direct all telephone calls and correspondence to:

Mary M. Lee, Esq.
Attorney at Law
3441 W. Memorial Road, Suite 8
Oklahoma City, Oklahoma 73134-7000
Phone (405) 302-0900
Fax (405) 302-0901
Email: mml@marymlee.com

Statement Under 37 C.F.R. § 3.73(b)

Natural Volume Systems, LLC ("Assignee"), an Oklahoma limited liability company, the assignee of the entire right, title and interest of the above-referenced application, hereby seeks to take action in the United States Patent and Trademark Office in this matter.

I, Robert W. Naegeli, am Vice President of Assignee, and I am authorized to sign on its behalf.

Ownership by Assignee is established by an assignment (document) being submitted for recordal herewith. A copy of the assignment is attached.

On behalf of Assignee, I certify that I have reviewed the attached assignment document and that to the best of my knowledge and belief title to this application is in Assignee.

NATURAL VOLUME SYSTEMS, LLC

By: Robert W. Naegeli
Robert W. Naegeli, Vice President

Date: June 13, 2000

COMBINED DECLARATION AND POWER OF ATTORNEY

**(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL,
CONTINUATION, OR C-I-P)**

As a below named inventor, I hereby declare that:

TYPE OF DECLARATION

This declaration is for an original application.

INVENTORSHIP IDENTIFICATION

My residence, post office address and citizenship are as stated below, next to my name. I believe that I am the original, first and sole inventor of the subject matter that is claimed, and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

HAIR STYLING BRUSH WITH REVERSE AIR FLOW

SPECIFICATION IDENTIFICATION

The specification is attached hereto.

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in 37, Code of Federal Regulations, Section 1.56, and which is material to the examination of this application, namely, information where there is a substantial likelihood that a reasonable Examiner would consider it important in deciding whether to allow the application to issue as a patent, and in compliance with this duty, there is attached an information disclosure statement, in accordance with 37 C.F.R. Section 1.98.

POWER OF ATTORNEY

I hereby appoint the following practitioner(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

APPOINTED PRACTITIONER(S)

REGISTRATION NUMBER(S)

Mary M. Lee

31,976

I hereby appoint the practitioner(s) associated with the Customer Number provided below to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

SEND CORRESPONDENCE TO

DIRECT TELEPHONE CALLS TO:

Mary M. Lee
3441 W. Memorial Road, #8
Oklahoma City, Ok 73134-7000
United States
Customer Number 23547

Mary M. Lee
1-405-302-0900

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

Tommy Leon Myatt

Signature:

Tommy Leon Myatt

Date:

6-13-2000

Country of Citizenship: U.S.

Residence: Edmond, OK U.S.

Post Office Address 140 W. Wayne, Edmond, OK 73003 U.S.